



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/933,633	08/20/2001	Gnanaprakasam Pandian	M-8371 US	6410
33031	7590	08/25/2006	EXAMINER	
CAMPBELL STEPHENSON ASCOLESE, LLP			JUNTIMA, NITTAYA	
4807 SPICEWOOD SPRINGS RD.				
BLDG. 4, SUITE 201			ART UNIT	PAPER NUMBER
AUSTIN, TX 78759			2616	

DATE MAILED: 08/25/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Period for Reply

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 June 2006.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
4a) Of the above claim(s) 7, 19, 20 and 22 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 21 is/are allowed.
- 6) ☒ Claim(s) 1, 3, 5, 6, 8, 14, 15 and 23 is/are rejected.
- 7) ☒ Claim(s) 2, 4, 9-13 and 16-18 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 July 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. This action is in response to the amendment filed on 6/5/2006.
2. Claims 7, 19, 20, and 22 were cancelled.
3. Claim 21 is allowed.
4. Claims 1 and 14 stand rejected under 35 U.S.C. 102(b).
5. Claims 3, 5, 6, 8, 15, and 23 remain rejected under 35 U.S.C. 103(a).
6. Claims 2, 4, 9, 10, 11, 12, 13, 16, 17, and 18 remain objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1 and 14 are rejected under 35 U.S.C. 102(b) as being anticipated by Liang et al. (“Liang”) (USPN 5,781,529).

Regarding claim 1, Liang teaches a method comprising:

a first network switch (a node whose node ID corresponds NODE IP specified in ELEMENT#2 that receives the CALL SETUP message with Routing DTL information element, col. 7, ll 48-63) receiving a message (a CALL SETUP message having BYTE 1 of ELEMENT#2 being empty, Fig. 3, col. 5, ll 66-col. 6, ll 1, and col. 7, ll 56-66) at one (input port) of a plurality

Art Unit: 2616

of interfaces to the first network switch, wherein the message comprises data (BYTE 0, Fig. 5, which includes NODE ID of the current ELEMENT, e.g. ELEMENT #2, of a routing DTL shown in Fig. 4, col. 6, ll 1-16);

the first network switch generating first data (BYTE 0 containing NODE ID of the current ELEMENT, e.g. ELEMENT #2, of the CALL SETUP message and BYTE 1 of the current ELEMENT, e.g. ELEMENT #2, which includes the INPUT SLOT ID of the receiving node) as a function of both the data (BYTE 0 of Element #2) and first interface identifier data (INPUT SLOT ID of the receiving node in the current ELEMENT, e.g. ELEMENT # 2) which corresponds to the one of the plurality of interfaces (col. 7, ll 56-63) and wherein generating the first data comprises concatenating the first interface identifier data with the data (BYTE 0 and BYTE 1 of ELEMENT #2 of the modified CALL SETUP message are concatenated as shown in Figs. 4 and 5, col. 6, ll 2-8 and col. 7, ll 56-63);

the first network switch replacing the data in the message with the first data thereby creating a first modified message (the CALL SETUP message is modified with BYTE 0 of Element #2 and BYTE 1 of ELEMENT #2, col. 7, ll 56-63);

the first network switch outputting (forwards) the first modified message at another of the plurality of interfaces (output port of the received node) (col. 7, ll 63-66).

Claim 14 is a computer readable medium claim corresponds to method claim 1, and therefore is rejected under the same reason set forth in the rejection of claim 1 with an addition of instructions executable by a processor contained in a network switch (operations conducted by

Art Unit: 2616

processor means at a receiving node, col. 9, ll 25-col. 10, ll 41) implementing the method of claim 1.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 3, 5, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Liang et al. ("Liang") (USPN 5,781,529).

Regarding claims 3, 5, and 15, Liang teaches the first network switch creating a first SVC/allocating a portion of its data processing resources (VPI/VCI) for processing communication data, wherein the first SVC is created/the portion of its data processing resources is allocated in response to receiving the message (an incoming message, e.g. a SETUP message). See col. 7, ll 56-66, see also col. 2, ll 49-51.

Liang fails to explicitly teach that the first network switch storing data relating to the first SVC/the allocated portion of its data processing resources into a memory location, wherein the memory location corresponds to the first data.

However, an official notice is taken that data relating to the first SVC/ the allocated portion of its data processing resources, e.g. a VPI/VCI value, is usually stored into a memory location of the node in order to keep track of the resource being allocated and the SVC being established.

Therefore, since the first SVC/the allocated portion of the switch's data processing resources, i.e. a VPI/VCI value, is designated by a receiving node and corresponds to the corresponding DTL element which includes the NODE ID and input port value of the receiving node (col. 7, ll 56-65), it would have been obvious to one skilled in the art at the time the invention was made to modify the teaching of Liang to include that the first network switch storing data relating to the first SVC// the allocated portion of its data processing resources into a memory location, wherein the memory location corresponds to the first data (i.e. the NODE ID and input port value of the receiving node) in order to keep track of the resource being allocated and the first SVC being established.

11. Claims 6, 8, and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Liang et al. ("Liang") (USPN 5,781,529) in view of the admitted prior art (Background of the Invention section of the specification).

Regarding claim 6, Liang teaches that the message (the CALL SETUP message with Routing DTL information element, col. 7, ll 48-63) comprises call reference data (call reference, Fig. 3). However, Liang fails to explicitly teach the first network switch (a receiving node) copying the call reference data into a memory location which corresponds to the first data.

The admitted prior art teaches that each ATM switch (the first network switch) must copy a call reference (the call reference data) into a memory location which corresponds to the switch and SVC or VPI/VCI (specification, page 1, ll 15-page 2, ll 9).

Therefore, since the first data includes NODE ID of the first network switch (see rejection of claim 1), it would have been obvious to one skilled in the art at the time the

Art Unit: 2616

invention was made to modify the teaching of Liang to include the first network switch copying the call reference data into a memory location which corresponds to the first data. The suggestion/motivation to do so would have been to enable the first network switch to identify the corresponding SVC and allocated resource to be released when the call through the switch is to be terminated.

Regarding claim 8, Liang teaches that the first network switch (a node that receives the CALL SETUP message with Routing DTL information element, col. 7, ll 48-63)) must create a first SVC (VPI/VCI, col. 10, ll 42-52 and 56-63) for processing communication data transmitting between at least two end devices (originating and terminating DTEs, col. 4, ll 65-col. 5, ll 3. Liang further teaches call reference data (call reference, Fig. 3).

However, Liang does not teach the first network switch mapping the first SVC to the call reference data.

The admitted prior art teaches that each ATM switch (the first network switch) must map a SVC to a call reference (the call reference data) for SVC release as part of a call termination (specification, page 1, ll 15-page 2, ll 9).

Therefore, it would have been obvious to one skilled in the art at the time the invention was made to modify the teaching of Liang to include the first network switch mapping the first SVC to the call reference data as recited in the claim. The suggestion/motivation to do so would have been to enable the first network switch to identify the corresponding SVC and allocated resource to be released when the call through the switch is to be terminated.

Regarding claim 23, Liang teaches a network switch, comprising:

Art Unit: 2616

A processor (processor means at a receiving node, col. 9, ll 25-col. 10, ll 41).

An instruction memory (the processor must include a memory, col. 9, ll 25-col. 10, ll 41) comprising instructions executable by the processor.

Wherein the processor implements a method in response to executing the instructions, the method comprising:

Generating first data (BYTE 0 containing NODE ID of the current ELEMENT, e.g. ELEMENT #2, of the CALL SETUP message and BYTE 1 of the current ELEMENT, e.g. ELEMENT #2, which includes the INPUT SLOT ID of the receiving node) in response to the network switch (a node whose node ID corresponds NODE IP specified in ELEMENT#2 that receives the CALL SETUP message with Routing DTL information element, col. 7, ll 48-63) receiving a message (a CALL SETUP message having BYTE 1 of ELEMENT#2 being empty, Fig. 3, col. 5, ll 66-col. 6, ll 1, and col. 7, ll 56-66) at one (input port) of a plurality of interfaces to the network switch, wherein the message comprises data (BYTE 0, Fig. 5, which includes NODE ID of the current ELEMENT, e.g. ELEMENT #2, of a routing DTL shown in Fig. 4, col. 6, ll 1-16), wherein the first data is generated as a function of both the data (BYTE 0 of Element #2) and a first interface identifier (INPUT SLOT ID of the receiving node in the current ELEMENT, e.g. ELEMENT # 2), wherein the first interface identifier corresponds to the one of the plurality of interfaces of the network switch, and wherein generating the first data comprises concatenating the first interface identifier data with the data (BYTE 0 and BYTE 1 of ELEMENT #2 of the modified CALL SETUP message are concatenated as shown in Figs. 4 and 5, col. 6, ll 2-8 and col. 7, ll 56-63);

Art Unit: 2616

However, Liang fails to explicitly teach releasing one switched virtual circuit, SVC, corresponding to the first data.

The admitted prior art teaches that in an ATM network, when a call through a switch is to be terminated, the switch releases its SVC corresponding to the call, and generates a release message instructing the neighboring switches (the first network switch) to release their SVCs (SVCs must also correspond to the respective switch, i.e. NODE ID) corresponding to the call to be terminated. The neighboring switches repeat the process until all SVCs allocated to the terminated call have been released.

Because the first data also includes the NODE ID (col. 7, ll 56-65 and the rejection of claim 1), it would have been obvious to one skilled in the art at the time the invention was made to modify the teaching of Liang to include releasing one switched virtual circuit, SVC, corresponding to the first data as recited in the claim. The suggestion/motivation to do so would have been to enable a network switch, i.e. the first network switch, to release a SVC upon receiving a release message.

Response to Arguments

12. Applicant's arguments filed 6/5/2006 have been fully considered but they are not persuasive.

A. In the remarks regarding independent claims 1, 14, and 23, the applicant argues that Liang does not teach the limitation “replacing the data in the message [BYTE 0] with the first data [BYTE 0 and BYTE 1]” as such operation is not shown in the cited portions of Liang and

Art Unit: 2616

the interpretation does not make sense because replacing a single byte with multiple bytes clearly modifies the single byte nature of BYTE 0 as disclosed by Liang.

In response, Liang clearly teaches the claimed limitation. Liang teaches the following:

“Thus, when a node [a node whose node ID corresponding to NODE ID specifies in ELEMENT#2] receives a DTL, it looks for the first element of the DTL which as not had the process flag set. That element should include the node ID of the receiving node. Upon finding the appropriate DTL element, the receiving node changes the process flag of the element, inserts the input slot ID [BYTE 1, which was originally empty when the DTL arrived at the receiving node, is now containing the input slot ID value] and input link (i.e. the receiving port) values in their appropriate fields, and designates a VPI/VCI for that element. Then, the receiving node forwards the message, with the updated DTL to the output port designated by the DTL...”

(Liang, col. 7, lines 56-66, Examiner’s interpretation added).

As seen from above, the data (BYTE 0 containing NODE ID value) of the received message (a received DTL with BYTE 1 of ELEMENT#2 being empty) is now replaced with the first data (BYTE 0 containing NODE ID value and BYTE 1 now containing the input slot ID value). This operation is shown in the cited portion of Liang, col. 7, lines 56-63 and works in a similar way to that described in the specification on page 8, lines 9-16 and Figs. 4B and 4C. Although Liang’s DTL structure clearly supports the replacing of the value of BYTE 0 with the values of BYTE 0 and BYTE 1 as shown in Figs. 4 and 5 (the structure of DTL and its ELEMENTs do not change as a result of the value of BYTE 0 of ELEMENT#2 of the received DTL being replaced with the values of BYTE 0 and BYTE 1 of ELEMENT#2 of the updated DTL), it is irrelevant whether replacing a single byte with multiple bytes modifies the single byte nature of BYTE 0 as the claims do not exclude such condition. Therefore, Liang teaches the limitation as claimed. The rejection is sustained.

Art Unit: 2616

B. In the remarks, the applicant argues that the official notice taken on the limitation “data” recited in claims 3, 5, and 15 is improper due to different interpretations of the claimed term “data” provided in the Office Action dated 3/23/2006 and in the Advisory Action dated 12/13/2005.

In response, it is important to note that the claimed “data” as stated in claims 3, 5, and 15, (i.e., “the first network switch storing data relating to the first SVC into a memory location..”, “the first network switch storing data relating to the allocated portion of its data processing resources into a memory location..”, “storing data relating to the first SVC into a memory location..”) does not refer to the claimed “data” recited in claims 1 and 14 from which claims 3, 5, and 15 depend. Therefore, different interpretations of the limitation “data” recited in the independent claims 1 and 14 in the above Office Action and Advisory Action are irrelevant.

Moreover, for the rejection of claims 3, 5, and 15, the examiner has interpreted the claimed “data” as a VPI/VCI value. Official notice was taken to show that storing data relating to the first SVC/ the allocated portion of its data processing resources such as a VPI/VCI value into a memory location of the node in order to keep track of the resource being allocated and the SVC being established would be obvious to one skilled in the art. It is noted that the applicant did not challenge the Official notice assertion and the applicant failed to point out an error in the motivation. As such, the rejection of claims 3, 5, and 15 based on Official Notice is proper.

Conclusion

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Art Unit: 2616

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.


14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nittaya Juntima whose telephone number is 571-272-3120. The examiner can normally be reached on Monday through Friday, 8:00 A.M - 5:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on 571-272-3155. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2616

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Nittaya Juntima
August 18, 2006



HUY D. VU
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600